CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Jeff Provenzano
Matt Loesch

SUBJECT: **See Below**

DATE: December 17, 2025

Approved

Date: 12/19/25

COUNCIL DISTRICT: 4

SUBJECT: Actions Related to the Emergency Repairs of Pond A18's Southern Gate Structure Located at the San José-Santa Clara Regional Wastewater Facility

RECOMMENDATION

(a) Accept the staff report detailing the status of the San José-Santa Clara Regional Wastewater Facility's Pond A18's southern gate structure, the likelihood for failure, the consequences of failure, and the plan for immediate action to repair the structure.

(b) Adopt a resolution by the affirmative vote of at least eight members of the City Council as required by Section 1217 of the City Charter:

(1) Declaring and finding that, based on substantial evidence, public interest and urgent necessity demand the immediate contractor procurement to perform emergency repair of the San José-Santa Clara Regional Wastewater Facility's Pond A18 southern gate structure without formal bidding as otherwise required under Section 1217 of the City Charter for the preservation of life, health, and property, and that the emergency repair will not permit a delay resulting from formal bidding as otherwise required under Section 1217 of the City Charter, and that the action is necessary to respond to the urgent necessity; and

(2) Delegating authority to the Directors of Environmental Services and Public Works to:

(i) Negotiate and award construction contracts necessary to repair the southern gate structure in order to protect Pond A18 and levees in an amount not to exceed $2,150,000;
(ii) Approve a 20% contingency in an amount not-to-exceed

$430,000; and

(iii) Direct staff to file CEQA emergency exemption documentation and pursue required agency emergency permits concurrently.

SUMMARY AND OUTCOME

Approval of this recommendation by the City Council will enable staff to immediately take actions necessary to protect property and the environment by performing necessary urgent repairs of the Pond A18 southern gate structure and walkways to avoid catastrophic failure, maintain a safe operational platform for staff, and restore functionality of the facility.

BACKGROUND

Pond A18 is a former salt pond that was purchased by the San José-Santa Clara Regional Wastewater Facility (RWF) in 2003. Prior to being purchased, the pond was operated as a salt evaporation pond by Cargill, Inc. as part of their salt production process. Water was pumped into the pond through a siphon that ran under Artesian Slough and the western levee. High salinity water in Pond A18 was then pumped out of the pond through a second siphon into other salt evaporation ponds to the north. This series of impoundments increased salinity at each step.

Pond A18 is located on the northwestern section of RWF lands and is approximately 856 acres in size (see Attachment 1 – Project Location Map). It is surrounded by levees, only a portion of which are "engineered". Approximately three-quarters of the levee system is dredged bay mud that has compacted on its own over time, is easily eroded, is not accessible to vehicles when moist or wet and requires ongoing maintenance in order to provide containment of the pond waters and flood protection for the RWF and land/property south of Pond A18.

The RWF operates Pond A18 under its own Waste Discharge Permit (#R2-2005-0003), which requires that the pond maintain adequate water levels to control odors, dissolved oxygen, and erosion of the interior (southern) levee. Exchange of water between Pond A18 and the San Francisco Bay is accomplished via two hydraulic control structures, the northern and southern "gate structures", located along the levee bounding the western edge of the pond that were installed as part of the purchase agreement with Cargill, Inc.

These bay front structures are constructed of timber products. Each structure has two 48-inch plastic pipes (for a total of four pipes) with one-way slide/flap-gate valves on either end of the pipes, allowing staff operational flexibility in managing water movement and water quality within the pond. The northern gate structure was fully reconstructed in

2015 and is currently in sound condition. The southern gate structure is more than 21 years old, is at the end of its designed life, and is at risk of failure.

ANALYSIS

City of San José (City) crews have been performing routine maintenance work since the gate structures were installed in 2004. Increased maintenance efforts began in 2011 to mitigate erosion damage, mechanical issues and structural damage which appeared to be accelerating due to the age of the timber members, exposure to the natural elements, and underlying soil erosion. The City replaced the northern gate structure in 2015.

In 2018, the Pond A18 South Gate Levee Repair Project was completed, with the work completed by Sweetwater Construction under a design bid build procurement process. It included the installation of sheet piles, whalers, and tie rods along the banks on either side of the south gate structure (SGS). The purpose was to protect and repair erosion occurring to the immediate north and south of and adjacent to the structure, resulting from eddy currents due to the movement of water through the structure. The project was successful in addressing that aspect of levee erosion.

In January 2025, a technical memorandum was completed by HydroScience, Inc. (consultant) presenting results and recommendations based on an analysis by civil, geotechnical, and structural engineers. The City initiated this work in response to new observations of significant soil erosion directly behind the timber structures and corresponding deformation and deterioration of the SGS itself on the slough side, following a series of heavy storms in 2023-2024, similar to storms in winter 2022-2023.

Existing Condition and Likelihood of Structural Failure

The results of the technical memorandum in January 2025 concluded that the SGS is in critical condition and at risk of failure due to substantial subsurface erosion, broken piles and the deterioration of timber piles. (See Attachment 2 – Damaged Piles).

In the process of implementing critical repairs by RWF maintenance staff during summer 2025, it was determined that structure deterioration had accelerated beyond the original scope, requiring updates to the consultant design.

Recent site visits on October 21 and November 24, 2025, revealed a further increase in soil erosion. This has worsened structural degradation and made the SGS condition more severe than previously observed and documented. Rainfall has further softened the backfill and accelerated material loss.

All three timber piles (12 inches in diameter, approximately the size of wooden utility poles) that support the headwall located on the slough side have failed below the normal tidal water level due to excessive horizontal loading. Significant bending, cracking and splitting of the piles and structure are visible. The horizontal timber supports that are visible above water are projected to worsen or fail completely as the horizontal loads increase due to consolidation and densification of backfill material. These failure modes are more closely linked to overstress rather than deterioration.

Significant underwater undermining and backfill loss has caused structural settlement and material loss above the waterline. This subsurface migration worsens with each tide and is intensified by turbulence and scour from water flowing through the twin 48-inch pipes. During recent visits on October 21, 2025, and November 24, 2025, the consultant reported that the north and center piles had ruptured, with their top halves completely separated from the bottom halves.

The slide/flap-gate valves allow water flow from the pond to the slough (east to west) for water management. Structural shifting above the pipes has strained the valve mechanisms, making them hard to operate. This limits water control between the slough and pond, increasing the risk of poor water quality for fish and wildlife especially as temperatures rise in the spring and summer. This compromised operation raises the likelihood of permit violations due to reduced operational flexibility.

Recent storms and high tidal movement resulted in increased water movement between the slough and ponds, causing accelerated erosion and increased stress on the gate structures. The recent condition assessment report indicated that continued erosion and material migration could lead to a sudden loss of the SGS, especially during seismic or heavy rain events. The November 24, 2025 site visit by the consultant observed further breakage in the timber piles and shifting of the entire structure towards the slough. The evaluation report and subsequent site visit observations result in a classification of the SGS condition as critical. It is this potential for failure that causes the highest concern and the need for immediate action.

Consequence of Structural Failure

The most likely mode of failure for the SGS would be the sudden collapse of the slough-side headwall and wingwalls due to the horizontal stress, fatigued timber members and scour beneath the pipes. Loss of the headwall would pull the slide/flap-gate valves off of the ends of the 48-inch pipes, leading to a direct and unregulated movement of water, fish and wildlife through the open pipes. The turbulent action of sudden and uncontrolled flow through the open pipes would quickly lead to total failure of the non-engineered levee section causing a breach of the levee at this location. A breach in this area would likely widen to over 100 feet wide in a few tide cycles, similar to what occurred when a salt pond to the north was intentionally breached as part of a Santa Clara Valley Water District mitigation project in 2006 (Pond A21).

Under a breach scenario, Pond A18 would be open to the Bay and tidal action and there would be no hydraulic control of pond discharges or pond water levels. This means that tidal flood protection is now shifted from the western and northern levees to the southern levees, which are not engineered, are in the poorest condition, and have the lowest levee top elevation of all the levees surrounding the pond. One of the practical consequences of uncontrolled tidal action in Pond A18 is flooding to the south of the pond, including areas immediately east of the RWF discharge channel and up to Los Esteros Road during high tides.

Beyond the threat to the lands south of the pond, the Pond A18 facility itself is a valuable asset worth protecting. Should the SGS situation deteriorate further and a breach of Pond A18 occur, the City would be forced into immediate action to repair the breach and gain control of the property or count the pond as a total loss and begin construction efforts to bolster the southern levee. In either case, the City will expend considerable resources and funds to protect critical infrastructure and assets. Moreover, a levee breach at Pond A18 that leads to uncontrolled water movement between the slough and pond would be a violation of Order Number R2-2005-0003, likely leading to fines and enforcement action for non-compliance.

Proposed Repair of the SGS

The general consensus among the consultant and City engineering staff is that there is a repair option that would extend the life of the SGS and reduce its potential for failure until ownership is transferred to Santa Clara Valley Water, which is the future plan. A complete removal and replacement of the SGS was considered but determined to not be the appropriate or most cost-effective alternative.

The proposed work includes comprehensive structural rehabilitation of the southern gate's slough and pond-sides structure. Under this alternative, concrete mats, geotextile fabric, and riprap (large angular stones) will be installed within the submerged areas of the structure to stabilize the channel bottom and prevent further scour.

The three outer timber piles will be reinforced with stainless-steel sleeves installed 10 feet below the water. The upper sections of the center and northern piles will be removed, new casings placed and filled with concrete for strength and alignment. Damaged wooden planks and beams will be replaced. Steel piles, tied down with underground tie-rods and extra reinforcement, will stabilize the levee near the culverts and keep the restored timber piles in tension.

The walkway, guardrail, and access steps will be reconstructed to meet current safety and stability requirements. The gate frame and associated components will be realigned with the discharge pipes to restore proper operation. The surrounding ground will be recompacted and backfilled with controlled low-strength material to provide uniform support and limit future settlement.

The details of this repair design will be refined in coordination with contractors qualified to perform this work and adjusted as necessary based on any further degradation that may occur.

Most work will be performed from the levee crest and adjacent ground surface; however, placement of riprap, replacement of submerged planks and beams, and pile restoration will require work below the water surface within the tidal zone.

Public Works' projects at the RWF are subject to Section 1217 of the City Charter, which requires that the primary means of procuring a Major Public Works Contract such as this proposed project at the RWF will be formal public bidding in which, following public notice, the City will award the contract to the lowest responsive bidder that is responsible. The formal public bidding process is set out in further detail in Section 1217 of the City Charter and applicable provisions in the Municipal Code.

Among other limited exceptions, Section 1217 of the City Charter provides that Public Works projects deemed by the City Council to be of urgent necessity for the preservation of life, health, or property, are not subject to the otherwise applicable formal public bidding requirements in the City Charter and the Municipal Code, provided the Public Works project is authorized by resolution of the City Council adopted by the affirmative vote of at least eight members of the City Council and containing a declaration of the facts constituting the urgency.

The recommended City Council action will allow staff to immediately procure contractors as appropriate to begin work without undergoing a sequential process of design consultant procurement followed by a contractor procurement.

Staff recommends that this work begin immediately to avoid any catastrophic failure of the SGS on the slough side. The recommended finding by the City Council of urgent necessity to preserve life, health and property will also expedite the environmental review and approval process of the project. This expedited approach offers the most efficient, expedient and complete solution.

Regulatory Compliance and Permitting

The needed work at the Pond A18 SGS will occur within tidal areas subject to multiple regulatory jurisdictions. Construction below the ordinary high tide line requires permits or approvals from the U.S. Army Corps of Engineers (Clean Water Act Section 404), the San Francisco Bay Regional Water Quality Control Board (Section 401 Water Quality Certification), the California Department of Fish and Wildlife (Streambed Alteration Agreement, Section 1602), and the San Francisco Bay Conservation and Development Commission (BCDC permit or amendment). Compliance with the California Environmental Quality Act is also required prior to initiating work. Under normal circumstances, obtaining these approvals can take nine to 12 months. However, the

project may proceed under emergency authorization procedures that allow these agencies to issue expedited or verbal emergency permits and enable the City to rely on the California Environmental Quality Act emergency exemption (Guidelines § 15269). This declaration would allow the City to accelerate the design and construction while still maintaining environmental oversight and post-construction documentation.

Based on the analysis above, and given the normal regulatory compliance and permitting timelines that would significantly delay construction of the repairs and likely result in SGS failure prior to that construction occurring, staff have determined that an emergency exists and propose that the recommended action be taken by the City Council in order to immediately begin expedited contractor procurement and permitting work so that repairs can be completed immediately.

Policy Alternatives

Alternative #1: Do not find an urgent necessity necessary for the preservation of life, health, and property, and proceed with traditional design-bid-build procurement.

Pros: Familiarity with procurement process with competitive bidding.
Cons: Does not permit timely repair of the SGS. Contractor procurement will take up to three months and regulatory permitting will likely take over six months to secure, possibly up to 12 months. Based on the current rate of degradation, the entire structure is likely to fail during the 2025-2026 winter season. A complete south gate structural failure would lead to higher cost of work and potential environmental permit non-compliance.
Reason for not recommending: Delaying the repair will leave the SGS vulnerable to failure. In addition, a traditional procurement method will lengthen the time that the pond gates are not operating as designed, possible leading to stagnant water in the pond and creating odors.

COST SUMMARY/IMPLICATIONS

The repair of the SGS is expected to cost approximately $2,912,000. The costs presented below are based on a planning-level estimate developed by a consultant and do not reflect contractor bids. Funding is available for urgent and unscheduled needs as described below.

1. TOTAL COST OF PROJECT:

Project Delivery	$332,000
Construction Not-to-Exceed Amount	2,150,000
Construction Contingency (20%)	430,000
Total Project Costs	**$2,912,000**

2. SOURCE OF FUNDING: Fund 512 – San José-Santa Clara Treatment Plant Capital Fund

BUDGET REFERENCE

The table below identifies the fund and appropriations to fund the contracts recommended as part of this memorandum and remaining project costs, including project delivery and contingency costs.

Fund #	Appn. #	Appropriation Name	Total Appropriation	Amount for Contract	2025-2027 Adopted Biennial Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	7395	Urgent and Unscheduled Treatment Plant Rehabilitation*	$1,500,000	$1,500,000	290	6/17/2025 31230
512	5690	Plant Infrastructure Improvements	$4,758,000	$650,000	286	10/21/2025 31252

**Funding from the Urgent and Unscheduled Treatment Plant Rehabilitation appropriation will be used first, as this emergency work was not scheduled. Remaining costs will be funded by the Plant Infrastructure Improvements appropriation.*

COORDINATION

This memorandum has been coordinated with the City Attorney's Office, the City Manager's Budget Office, and the Planning, Building, and Code Enforcement Department.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the January 13, 2026 City Council meeting. The status of the SGS will be shared with the Treatment Plant Advisory Committee on January 8, 2026.

COMMISSION RECOMMENDATION AND INPUT

This item is scheduled to be heard at the January 8, 2026, Treatment Plant Advisory Committee meeting. A supplemental memorandum with the Committee's

recommendation will be included in the amended January 13, 2026, City Council meeting agenda.

CEQA

Exempt, under Section 15269 - Emergency Projects, of the State Guidelines for Implementation of the California Environmental Quality Act.

PUBLIC SUBSIDY REPORTING

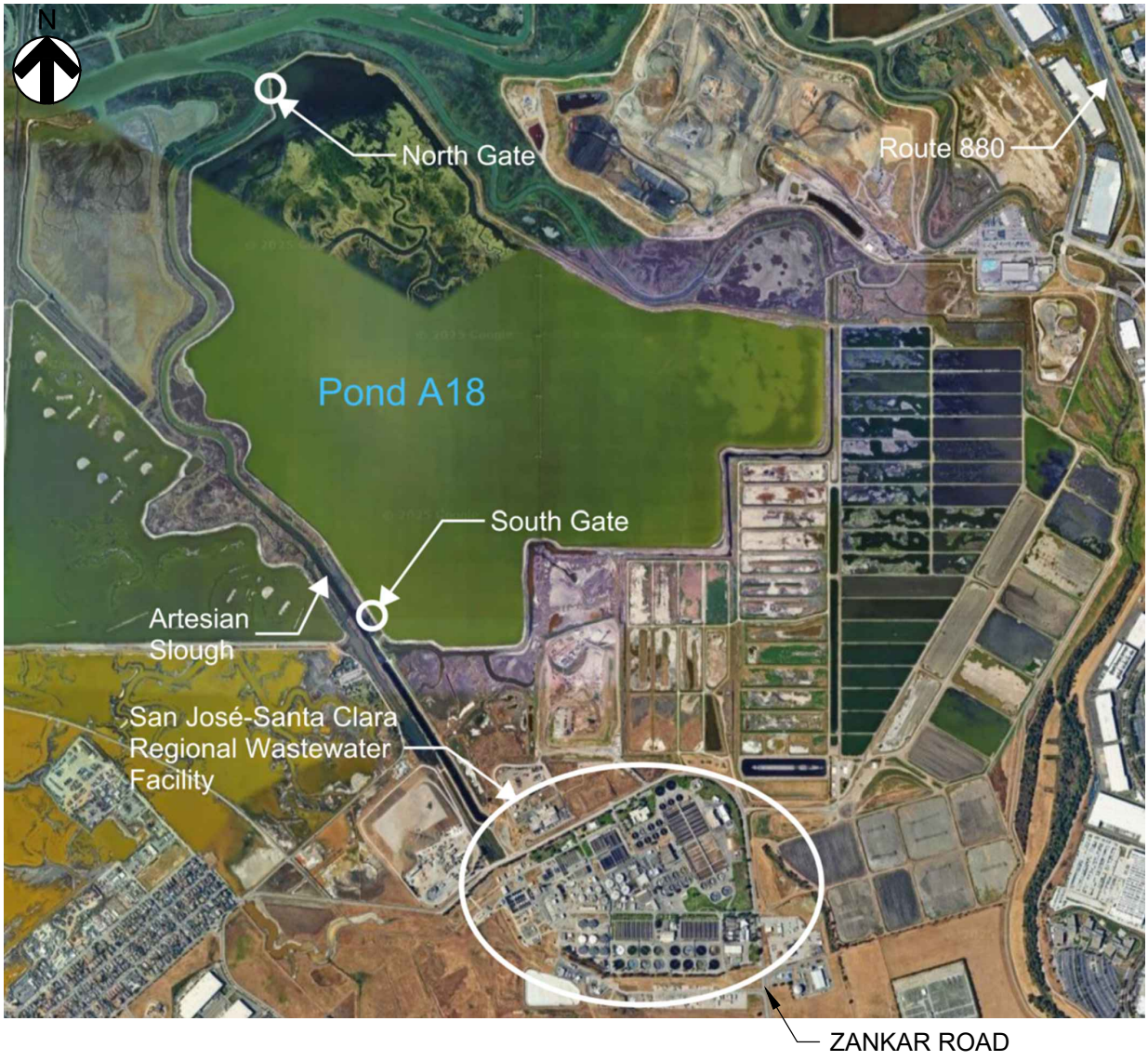
This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

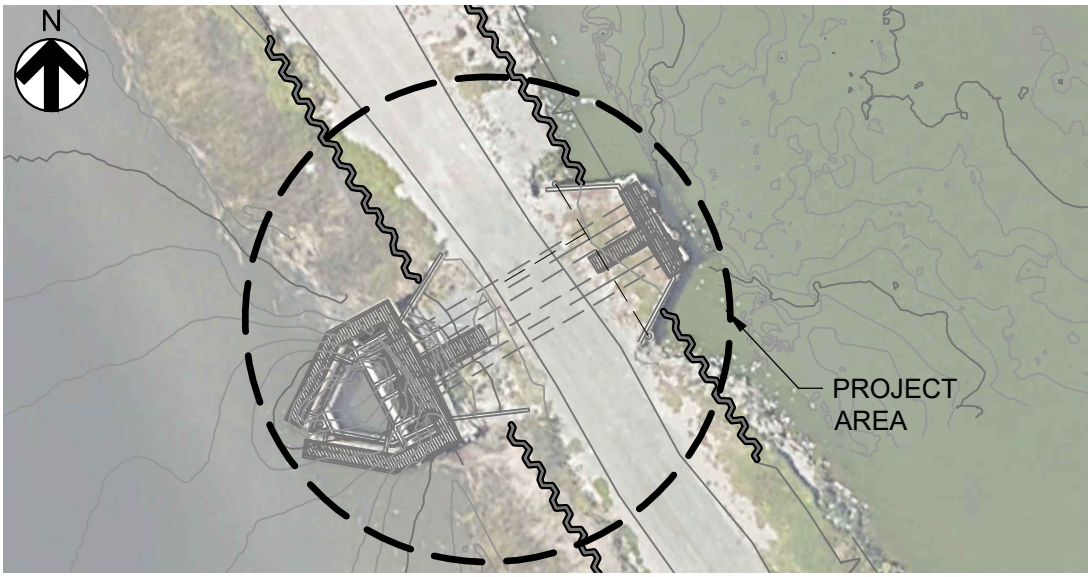
/s/
JEFF PROVENZANO
Director, Environmental Services

/s/
MATT LOESCH
Director, Public Works

The principal author of this memorandum is Lorenzo King, Wastewater Principal Engineer, Environmental Services Department. For questions, please contact Lorenzo.king@sanjoseca.gov or (408) 635-2014.

ATTACHMENTS:
Attachment 1 – Project Location Map
Attachment 2 – Damaged Piles





Attachment 1
City of San Jose
South Gate A18 South Gate Structure Maintenance Repair
Project Locaton

HydroScience

Photo: Center Pile (no. 2) is split

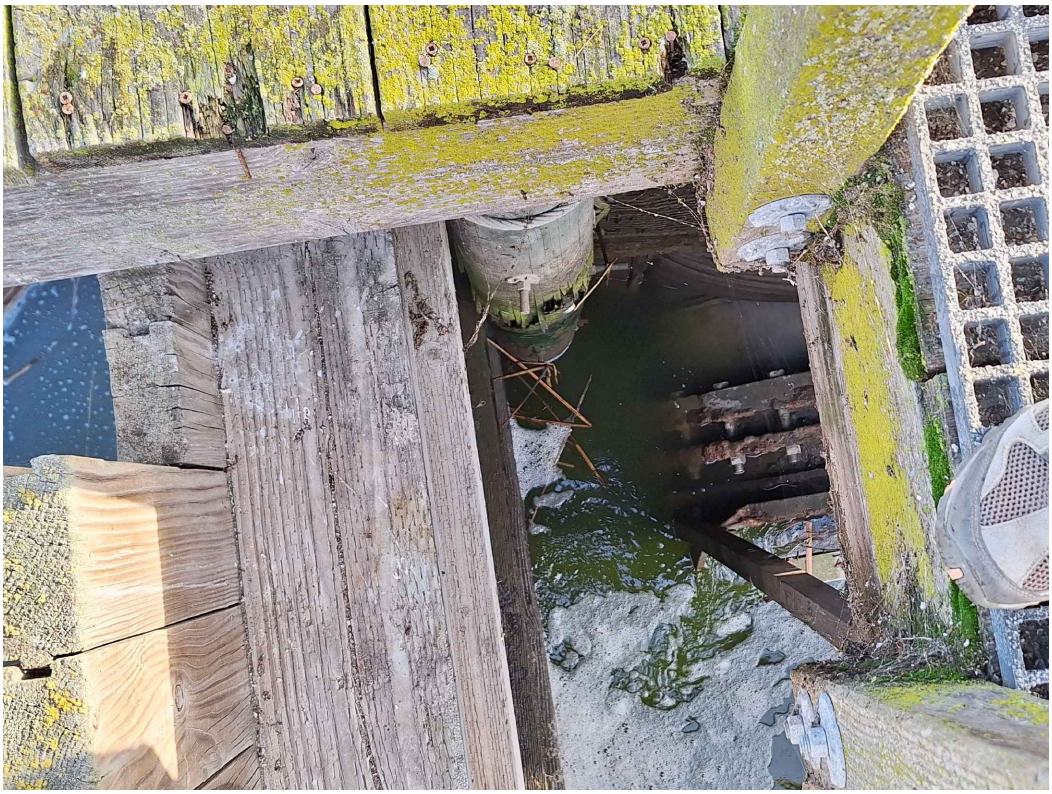


Photo: North Pile (no. 1) is cracked

Attachment 2
City of San Jose
South Gate A18 South Gate Structure Maintenance Repair
Damaged Piles

HydroScience